

Claims 1-4 (cancelled)

Claim 5 (currently amended) A conductive metallic soil penetrating electrode for use in making an electrical connection with soil for the purpose of measuring soil electrical parameters comprising in combination:

a) said electrode having an axially longitudinally elongated body defining first and second integral sections, the first section having ground engaging slim taper along the majority of its length, the second section being substantially cylindrical along the majority of its length,

b) said first section having a primary end defining a tip, and a secondary end forming a shoulder which extends outwardly away from a junction defined by said sections,

c) said first section at said junction having an overall cross dimension which exceeds the diameter of said second section proximate the junction, the ratio of said overall cross dimension to said second section diameter being about $4/3$,

d) said electrode configured to receive radio frequency energy at said second section,

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e) said tip being blunted to define a flat end and a shallowly tapered periphery, and having a diameter of about $3/16$ inch[[]],

f) said overall cross dimension is about $\frac{1}{2}$ inch,

g) said first section has an overall length of approximately 3 inches,

h) said taper is approximately 3.0 degrees,

i) the diameter of the second section proximate the junction is approximately $3/8$ inch,

j) the diameter of the second section along the majority of its length is approximately $3/8$ inch,

k) the second section has a length of approximately 3 inches,

l) the overall length of the electrode is approximately 6 inches,

m) said second section has a cylindrical surface locus to which the electrical connector is applied,

n) the first section is driven into the earth to a level proximate said junction.

Claims 6 and 7 (cancelled)

Claim 8 (currently amended) The electrode of claim 5 further characterized by ~~at least two of the~~ following:

- ~~i) said overall cross dimension is about~~
~~1/2 inch~~
- ~~ii) said first section has an overall length~~
~~of about 3 inches~~
- ~~iii) said taper is about 3.0 degrees~~
- ~~iv) the diameter of the second section~~
~~proximate the junction is about 3/8 inch~~
- ~~v) the diameter of the second section along~~
~~the majority of its length is about 3/8~~
~~inch~~
- ~~vi) the second section has a length of about~~
~~3 inches~~
- ~~vii) the overall length of the electrode is~~
~~about 6 inches~~
- ~~viii) said second section has a cylindrical~~
~~connector is applied~~
- ~~ix) the first section is driven into the~~
~~earth to a level proximate said~~
~~junction.~~
- o) said flat end defining the major
extent of said tip.